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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,508	11/12/2003	Tzu Chi Cheng	3221/23	4862

7590 04/19/2006

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EXAMINER
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REHM, ADAM C

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/705,508		CHENG ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Adam C. Rehm		2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/3/2006 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over SHIGEKAZU (JP 2003-249693) and ABE (US 5,535,230).
3. In regards to Claim 1, SHIGEKAZU provides at least one blue light emitting diode (1) as a blue light source; at least one red light emitting diode (2) as a red light source; and a fluorescent layer (3, Paragraph 14) formed by mixing fluorescent powders with transparent resin (Paragraph 14); the fluorescent layer being glued to the blue light emitting diode and the red light emitting diode (Figure 1); the blue light emitting diode and the red light emitting diode emitting blue light and red light, respectively, which are then mixed (Paragraph 16); the fluorescent layer absorbing radiation having a blue light

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to emit light with wavelengths different from the blue light and red light (Paragraph 16); wherein the YAG is activated by cerium (Paragraph 14).

4. In regards to Claim 9, SHIGEKAZU provides at least one blue light emitting diode (1) as a blue light source; at least one red light emitting diode (2) as a red light source; a fluorescent layer (3) formed by mixing fluorescent powders with transparent resin (Paragraph 14); and the fluorescent layer enclosing the blue light emitting diode (Figure 1); and a transparent resin layer enclosing the fluorescent layer and red light emitting diode (Figure 1, Paragraph 14); wherein the YAG is activated by cerium (Paragraph 14).

5. While SHIGEKAZU discloses the claimed invention, SHIGEKAZU does not specifically disclose the use of silicate (SmOn4-). However, ABE teaches the use of various fluorescent substances for the purpose of obtaining a desired wavelength (TABLE 2; Column 5, Lines 19-22).

6. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use silicate as taught by ABE for the purpose of obtaining the desired wavelength. Furthermore, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. OUDERKIRK ET AL. (US 2004/0150991) discloses a silicate phosphor.

8. NEDERPEL ET AL. (US 5,735,595) discloses a silicate fluorescent material.

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9. SRIVASTAVA ET AL. (US 6,466,135) discloses the use of borate to increase light efficiency.


***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Rehm whose telephone number is 571.272.8589. The examiner can normally be reached on M-F 9-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571.272.2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACR  
4/14/2006

  
JOHN ANTHONY WARR  
PRIMARY EXAMINER